

**REMARKS**

Claims 13-24 are all the claims pending in the application. Claims 13-24 presently stand rejected.

Claims 13-21 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Small et al. (5,129,899) in view of McMillan (5,556,687).

Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Small et al. (5,129,899) in view of McMillan (5,556,687), and further in view of Törmälä et al. (5,084,051).

Claim 23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Small et al. (5,129,899) in view of McMillan (5,556,687), and further in view of Eisermann et al. (2002/0123750).

**Analysis**

The Examiner responds to the previously filed Amendment (Office Action, pages 6-7) by arguing that (1) Small is *capable of* causing depression formed by squeezing, (2) the composite materials *help* resist splitting, and (3) a bevel is not a depression, recess or indentation.

With respect to the first two points, Applicants note that Small is not capable of causing a depression formed by squeezing because the beveled edge 26 has a cross section of the exact same shape as the shank portion 12. Thus, it would not be possible to cause depressions into the implant having this structure, even if the implant were made from a composite material.

Moreover, with respect to the bevel shape, claim 13 is amended to further clarify the structure of the edge of the longitudinal slot. Namely, the edge of the present invention is formed without any bevel or slant. The drawings (FIGS. 2 and 3) clearly show that the slot is formed with a sharp angle which is in direct contrast to a bevel formation.

Applicants note that a “recess” is a broader term of art than a “bevel”. More specifically, a recess is **any concavity** to the surface, whether angled or not, and thus, reads on the bevel. Therefore, since the present invention includes an implant formed without any recesses adjacent to the longitudinal slot, it is formed without any concavity adjacent to the slot, and thereby formed without any concavity whether or not its beveled.

A recess is defined as “a receding part or space” (Random House Unabridged Dictionary, 2006); or “an indentation” (American Heritage Dictionary, Fourth Edition, 2006); or “a small concavity” (Wordnet, Princeton University 2006).

The bevel 25, 26 of Small is not merely a slanted surface, but is actually a slanted surface formed on a recessed portion. In other words, a triangular recessed portion is formed and partly defined by the slanted edge. This distinction is most clearly shown in FIG. 1C, where the slot has three surfaces formed around it: one straight edge defining the actual slot, and two slanted surfaces 25, 26 intersecting the planar surface and the straight edge defining the slot. This triangular area formed by the straight edge and angled surface define a recessed area around the slot.



Still further, it is duly noted that the orientation of the fibers provide an important benefit to the present invention. In particular, the dominant perpendicular orientation of the fibers helps

hold the shape of the plate under load and keep the screw locked in an orthogonal position in relation to the plate. This aspect is lost with the cited references.

In view of the foregoing, claim 13 is distinguishable from the cited references.

Still further, regarding claim 19 which is directed to the use of titanium material in particular, it is essential to that the two materials, the composite plate and titanium nut, have different compositions and structures, and this difference enables the locking mechanism to function without the use of nests (which is required in Small). The cooperative performance between the composite plate and titanium nut provides the useful locking benefits of the present invention whereby using the harder material in conjunction with the softer composite element that is able to yield slightly to the pressure, helps maintain its form beneath. If the plate material was just plastic, over time it would tend to flow under the pressure of the titanium connecting element.

Still further, regarding claim 24 which is directed to the longitudinal slot having no indentations and depressions formed adjacent thereto, an indentation is any concave cut into a surface or an edge. Moreover, a depression is an area sunken below a surrounding area. Thus, the triangular area provided around the slot in Small would fall within this description. Therefore, claim 24 is patentable.

### **Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.116  
Application No.: 10/506,803

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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